United Nations TD/B/C.I/MEM.2/30

United Nations Conference on Trade and Development

Distr.: General
4 February 2015

Original: English

Trade and Development Board
Trade and Development Commission
Multi-year Expert Meeting on Commodities and Development
Seventh session
Geneva, 15–16 April 2015
Item 4 of the provisional agenda

Policy actions for mitigating the impact of price volatility in commodity markets on global food security and increasing access to market intelligence, financial resources and markets for commodity-dependent developing countries

Note by the UNCTAD secretariat

Executive summary

Commodity-dependent developing countries (CDDCs) face many constraints preventing them from fully harnessing the gains of commodity production and trade. A number of constraints are long-standing, such as commodity price volatility, lack of access to financial resources, poor market intelligence and limited export market access. This note revisits these issues, seeking to identify new opportunities and challenges, and also provides some policy recommendations.

Over the past decade, commodity markets have been characterized by high prices and heightened price volatility. This note discusses commodity price fluctuations and reviews the major actions that have been devised to mitigate their effects, stressing that although price volatility has declined over the past three years countries, in particular the most vulnerable countries, are still exposed to the vagaries of price fluctuations. There is a need to improve existing options or continue to explore innovative ways to mitigate the adverse effects of price volatility, at national, regional and international levels.

The combination of technological progress, the expansion of global value chains, rising South-South cooperation and, most recently, the adoption of the Agreement on Trade Facilitation by World Trade Organization (WTO) member countries, provides new opportunities to address the persistent constraints facing CDDCs in market intelligence, finance and market access. Sound Government policies and an innovative private sector are crucial to seizing these opportunities and delivering positive development outcomes.

GE.15-01807 (E)
1501807

Please recycle

Contents

		Page
	Introduction	3
I.	Volatility in global commodity markets and policy actions to mitigate its impact on global food security and economic welfare	3
	A. Volatility in global commodity markets	3
	B. Policy actions to mitigate the impact of volatility on global food security and economic welfare	7
II.	Improving access to market intelligence, financial resources and markets for CDDCs	11
	A. Access to market intelligence	11
	B. Access to financial resources	13
	C. Access to markets	17
III.	Conclusion	21

Introduction

1. The Doha Mandate highlighted the importance of identifying and implementing appropriate policies, at national, regional and international levels, to address the impacts of the volatility of commodity prices on vulnerable groups (paragraph 27). It also mandated UNCTAD to continue its work on agriculture to help developing countries achieve more sustainable and strengthened agricultural production, food security and export capacity (paragraph 56).

2. The volatility of commodity prices is a long-standing issue. However, fluctuations in commodity prices have been amplified over the past decade by a number of factors, including shocks to market fundamentals, increased financial investments in commodity-backed portfolios and erratic weather patterns. This note reviews and identifies policy options that could help mitigate the impact of fluctuations in commodity price on global food security and economic welfare.

3. Market intelligence, financial resources and market access are important for CDDCs to be able to build supply capacity and increase commodity-based revenues for sustainable development. In the past decade, the rapid development of information and communications technologies (ICTs), expansion of global value chains, rise of South-South cooperation and, most recently, progress in multilateral trade negotiations, as illustrated by the adoption of the Agreement on Trade Facilitation by WTO member countries, have provided new opportunities for CDDCs to improve their access to market intelligence, diversify financing sources and reduce trade costs. Seizing these opportunities while addressing remaining bottlenecks requires a renewed commitment to concerted and innovative policy actions and their implementation.

4. The first part of this note examines the extent, causes and impacts of commodity price volatility and its relation to global food security and economic welfare, and reviews policies for addressing the adverse effects of price volatility. The second part discusses new opportunities and challenges faced by CDDCs in improving access to market intelligence, diversifying sources of finance and expanding market access.

I. Volatility in global commodity markets and policy actions to mitigate its effect on global food security and economic welfare

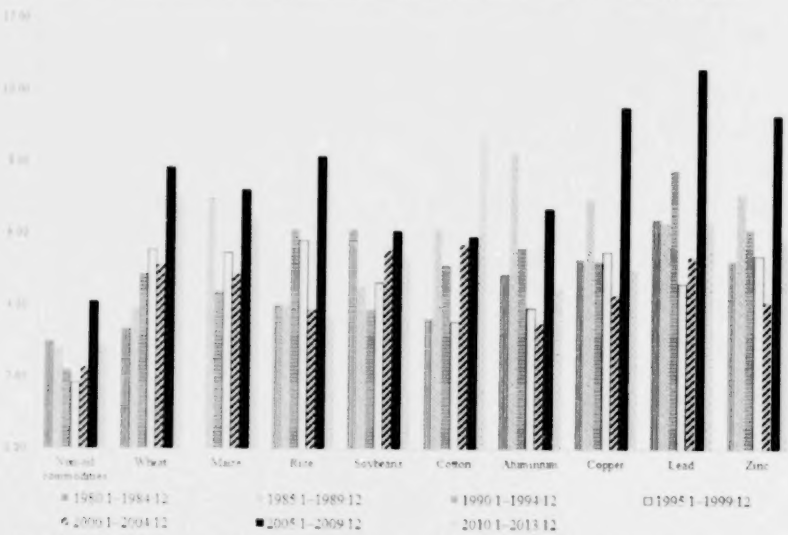
A. Volatility in global commodity markets

5. The issue of volatility in commodity markets is not new. In the past, the need to address volatility led to the establishment of price stabilization schemes under the auspices of the United Nations, and several international commodity agreements were adopted that aimed to stabilize prices, including agreements established in 1954 on sugar, in 1962 on coffee, in 1972 on cocoa and in 1980 on natural rubber. The recent commodity price boom, the longest and broadest in the recent history of commodity markets, was characterized by broad-based and heightened volatility. It was partly underpinned by the financialization of commodities (i.e. investment commodities and their derivatives increasingly traded as

financial assets).[1] For example, the average volatility of the UNCTAD non-oil commodity price index stood below 3.00 during the period 1980–2004 but increased to 4.10 during the period 2005–2009. Nevertheless, over the past few years, volatility has weakened in global commodity markets. Its average value for the index decreased to roughly 3 per cent during the period 2010–2013. A similar pattern is observed in selected commodities, as shown in figure 1.[2]

Figure 1

Average volatility measured as standard deviation of changes in monthly prices



Note: Standard deviation in the changes of real prices (monthly values) is shown, obtained by deflating nominal price indices by the United States of America Consumer Price Index. Changes in monthly prices were calculated as follows: rt = ln(pt) - ln(pt-1), where ln denotes a natural logarithm and pt denotes a monthly average of the price index.

Source: UNCTAD secretariat calculations, based on data from UNCTADStat, available at http://unctadstat/EN/Index.html.

6. Increased volatility in commodity markets over the past decade mirrored a succession of extreme upward and downward swings in prices. For example, the prices of the United States hard red winter No. 2 grade of wheat increased from a monthly average of $95 per ton in January 2000 to $203 in May 2007 before peaking at $481 in February 2008. They fell to $171 in July 2010 and rose again to $364 in February 2011. Rice prices rose from a monthly average of $190 per ton during the period January 2000–December 2002 to $393 in January 2008. In April and May 2008, they rose to an all-time high, exceeding $1,000. By December 2008, they had dropped to $551, and continued to fluctuate in the following years. Similar price swings were recorded for other commodity classes, such as agricultural products, minerals, metals and energy products, although the magnitudes have been lower over the past three years, as shown in figure 2 and figure 3.

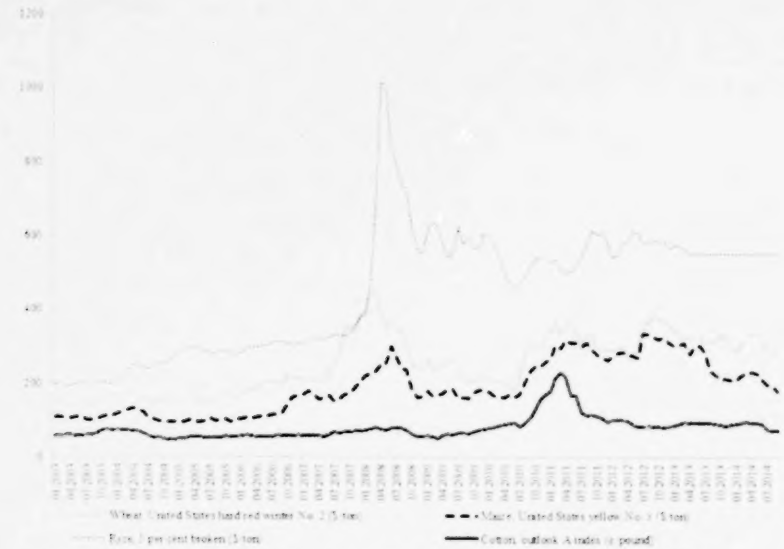
[1] UNCTAD, 2013, *Commodities and Development Report: Perennial problems, new challenges and evolving perspectives* (New York and Geneva, United Nations publication).

[2] Average volatility in this note is measured as the standard deviation of changes in monthly values of a commodity price or price index.

Figure 2

Evolution in nominal prices of selected agricultural commodities, January 2003–September 2014

(Dollars)

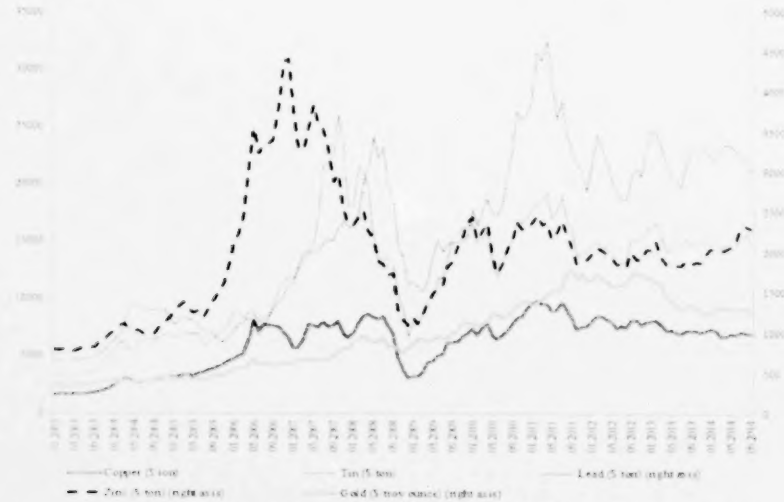


Source: UNCTAD secretariat calculations, based on data from UNCTADStat, available at http://unctadstat.UN/Index.html.

Figure 3

Evolution in nominal prices of selected metals, January 2003–September 2014

(Dollars)



Source: UNCTAD secretariat calculations, based on data from UNCTADStat, available at http://unctadstat.UN/Index.html.

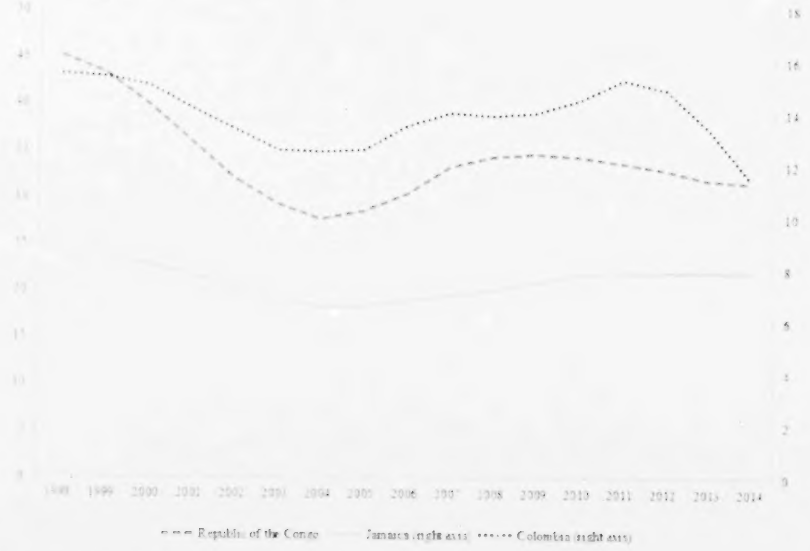
7. A number of factors at national and/or global levels help to explain the volatility in commodity prices over the past decade. At the global level, they include shocks to market fundamentals, fluctuations in energy prices transmitted to global commodity markets, financial investments in commodities-backed portfolios and erratic weather patterns. Price fluctuations at national levels have partly resulted from changes occurring in international markets. Country-specific factors include macroeconomic policies, exchange rate movements, market structures and openness, climatic shocks, pests and plant diseases, access to technologies and access of farmers to agricultural inputs.

8. Regardless of its cause, the volatility of commodity prices negatively affects global food security and economic welfare. The recent period of high and volatile food prices was characterized by an increasing rate of malnutrition in several countries. For example, in Colombia, the prevalence of undernourishment decreased steadily from 15.5 per cent of the country's total population in 1998 to 12.5 per cent in 2004, then increased to 15.3 per cent in 2011, as shown in figure 4. Furthermore, excessive swings in food prices, especially upward swings during the 2007–2008 global food crisis, led to social unrest in several developing countries and emerging economies.

Figure 4

Prevalence of undernourishment in selected countries as percentage of total population, 1998–2014

(Percentage)



Source: UNCTAD secretariat calculations, based on data from the statistics division of the Food and Agriculture Organization of the United Nations, available at http://faostat.fao.org/.

9. Unpredictable price variations increase uncertainty and risk for producers, traders, consumers and Governments who make suboptimal decisions as a result.[3] Particularly at the macroeconomic level, price fluctuations negatively affect the balance of payments and the level of foreign currency reserves, leading to macroeconomic instability. For net food-importing countries, swings in food prices imply instability in import bills, which affect their capacity to secure access to food for their populations.

10. At the microeconomic level, volatile food prices make household budgeting difficult, leading to haphazard spending. In most developing and least developed countries where households spend a large share of their income on food, uncertainty over budgeting often results in food insecurity.[4] Moreover, fluctuation in agrifood prices is often transmitted to smallholding farmers, with detrimental effects on their activities. For example, smallholders who increase their investments following a period of high prices may face difficulty recouping their investments when prices fall. The detrimental effects are exacerbated by poor credit or lack of access to credit, limited risk mitigation mechanisms and the fact that many of the farmers do not operate on a sufficiently large scale to carry over income from one season to another. As smallholders are the backbone of agricultural food production in several regions, any hurdle to their activities such as price volatility is a serious threat to food production and thus food security.

11. Figure 1 shows how commodity price fluctuations have narrowed over the last three years. However, market instability persists. Key recurrent factors that will continue to weigh on agricultural food commodity prices include erratic climate patterns, geopolitical tensions in some major food-producing regions, fluctuations in energy prices, swings in the values of major currencies, in particular the United States dollar, global macroeconomic instability, the pace of global economic recovery, particularly in emerging economies, and investments in commodity derivatives.

12. It is therefore expected that fluctuation in commodity prices will continue to affect global food security and economic welfare, unless appropriate policy responses are devised and implemented at national and global levels. Vulnerable countries will be particularly affected, making the search for solutions critical, especially on the eve of implementation of the post-2015 sustainable development agenda, whose motto is "leave no one behind".

B. Policy actions to mitigate the impact of volatility on global food security and economic welfare

13. The international community, including non-governmental organizations and civil society organizations, has acknowledged the urgency of acting to avert the negative effects of food price volatility on food security and economic welfare in developing countries. A number of initiatives have been launched to effect timely and coordinated responses to this issue.

14. It is important to distinguish between policy options and actions designed to prevent or reduce price volatility and those developed to mitigate its consequences. This note focuses on the latter. Short-term policies include food reserves and national and

[3] Food and Agriculture Organization of the United Nations and Organization for Economic Cooperation and Development (OECD), coordinators, 2011, Price volatility in food and agricultural markets: Policy responses, available at http://www.oecd.org/agriculture/pricevolatilityinfoodandagriculturalmarketspolicyresponses.htm (accessed 21 January 2015).

[4] UNCTAD, 2012, *Commodities at a Glance: Special issue on food security* (New York and Geneva, United Nations publication).

international safety nets. Medium to long-term options include the adoption of economic diversification and market-based risk management strategies.

Short-term policy responses

1. Food reserves

15. The increased volatility in agricultural commodity markets and the 2008 food crisis revived the debate on food reserves as an emergency response. Reliance on the market has shown its limits in terms of ensuring national and regional food security in times of crisis, particularly when there are extreme price shocks.[5] In such a context, emergency food reserves could become a relevant policy option.

16. To date, a number of initiatives on food reserves have been implemented at national and regional levels. For example, the Association of Southeast Asian Nations Plus Three Emergency Rice Reserve has worked to establish its reserves, towards which 787,000 tons of rice have been pledged.[6] The Economic Community of West African States has begun construction of a regional food security reserve managed by the Regional Agency for Agriculture and Food, based in Lomé, Togo.[7] Similar reserves also exist in other countries, such as Egypt and Ethiopia. These food reserves aim, among others, to provide an emergency intervention in the form of food aid to populations facing short-term shocks.

17. Ongoing and new food reserve initiatives face some challenges. At the global level, one major challenge is the WTO Agreement on Agriculture, particularly article 13 (the peace clause) and its provisions. The Agreement should incorporate some flexibility to allow vulnerable developing countries and least developed countries to build public food stocks for emergency purposes. It should also address imbalances in the treatment of subsidies and issues involving parameters such as external reference prices and eligible production used in the calculation of market price support.[8] At national and regional levels, existing and new initiatives should be effective in responding to shocks. For example, it has been argued that the Association of Southeast Asian Nations Plus Three Emergency Rice Reserve needs to improve its reserves in terms of governance and quantities if it is to fulfil its stated objectives. Other challenges include setting achievable objectives for stocks, selecting the composition of stockpiles and dealing with the costs associated with holding such reserves. There is also a need to devise strategies that would encourage food reserve programmes to procure their food from smallholder surpluses.

2. National and international safety nets

18. National and international safety net programmes include contingent non-contributory transfer programmes, in cash or in kind, designed to provide support to vulnerable countries and/or populations during periods of crisis, including periods of extreme shocks in commodity markets.

---

[5] P Belesky, 2014. Regional governance, food security and rice reserves in East Asia. *Global Food Security*. 3:167–173.

[6] RM Briones, A Durand-Morat, EJ Wailes and EC Chavez, 2012. Climate change and price volatility: Can we count on the Association of Southeast Asian Nations Plus Three emergency rice reserve? Sustainable Development Working Paper Series No. 24, Asian Development Bank.

[7] R Blein, 2013. What's new about the project of regional food security reserve in the Economic Community of West African States space? Food Reserves, available at http://www.foodreserves.org/?p=396 (accessed 21 January 2015).

[8] P Konandreas and G Mermigkas, 2014. WTO domestic support disciplines: Options for alleviating constraints to stockholding in developing countries in the Follow-up to Bali. Commodity and Trade Policy Research Working Paper No. 45, Food and Agriculture Organization of the United Nations.

19. At the global level, such assistance has been provided by international donors through various instruments, including emergency grant funding and loans (for example the Global Food Crisis Response Programme of the World Bank, which benefited from partnerships with civil society organizations and United Nations bodies and agencies, such as the Food and Agriculture Organization of the United Nations, the United Nations Children's Fund and the United Nations World Food Programme), to address the food crisis while encouraging the agricultural policies of beneficiary countries in order to increase their resilience to shocks. The Response Programme, which started at the height of the 2008 food price spike, benefited 65.9 million people in 49 countries.[9] The World Bank has developed new instruments to respond to future emergencies, partly building on the experience of the Programme, including the Crisis Response Window and Immediate Response Mechanism of the International Development Association and the exposure management framework of the International Bank for Reconstruction and Development, devised to support countries that are subject to a variety of crises and emergencies that can undermine their economic and social development efforts. Other international institutions, such as the International Monetary Fund, also assist low-income countries through loans to address fluctuations in their balance of payments arising from volatility in commodity markets. However, the effectiveness of these instruments in strengthening the resilience of countries to future shocks needs to be improved. Lessons learned from past experiences should be integrated into new instruments. In particular, quick disbursement and minimization of the cost burden for concerned countries are critical.

20. At the national level, safety net programmes have allowed Governments to support poor and vulnerable people. Such programmes include policies to compensate farmers for the effects of market instability and abnormally low prices or non-trade distorting measures to help the poor and vulnerable manage price risks. In the past decade, safety net programmes have been established in several developing and emerging economies. Today, over one fifth of the population of developing countries participates in a social safety net programme.[10] In Ethiopia, for example, the Productive Safety Net Programme targets chronically food-insecure households.[11] Steps have been taken to build on or improve similar initiatives in Bangladesh, Dominica, Ghana and the United Republic of Tanzania.

21. Despite efforts to build on and improve safety net programmes at national levels, challenges remain. In 2014, two thirds of the extreme poor were estimated to remain uncovered by any social safety net.[12] Several hurdles, such as the complexity and incoherence of approaches and difficulties in identifying and reaching the target population, hamper wider coverage. Simplifying and coordinating programmes in each country would help to transform them into genuine instruments of protection for the poor and vulnerable against extreme shocks in food markets.

---

[9] World Bank, 2013. Global food crisis response programme, available at http://www.worldbank.org/en/results/2013/04/11/global-food-crisis-response-program-results-profile (accessed 22 December 2014).

[10] U Gentilini, M Honorati and R Yemtsov, 2014. The state of social safety nets 2014. Working Paper No. 87984. World Bank, available at http://documents.worldbank.org/curated/en/2014/05/19487568/state-social-safety-nets-2014 (accessed 21 January 2015).

[11] G Ayel, R Beaujeu, R Blein, J Coste, F Gerard, S Konate, H Leturque, P Raye and G Siam, 2014. Food reserves and regulating market volatility in Africa. French Development Agency, available at http://www.afd.fr/webdav/site/afd/shared/PUBLICATIONS/RECHERCHE/Scientifiques/A-savoir/23-VA-A-Savoir.pdf (accessed 21 January 2015).

[12] Gentilini et al., 2014.

Medium to long-term policy responses

3. Economic diversification

22. Diversification strengthens the resilience of resource-rich countries to shocks by allowing them to derive their revenues from various sources and helps food-importing countries smooth their import bills by procuring food from various channels or via alternative crops. There are three diversification strategies, as follows: horizontal diversification through exporting (for export countries) or procuring (for import countries) alternative commodities; vertical diversification through processing; and diversification into non-commodity activities that exploit comparative advantages to boost economic growth.

23. Most CDDCs depend mainly on the export of a few, generally one to three, commodities. This concentration exacerbates their vulnerability to swings in commodity markets. Moreover, fluctuations in commodity prices tend to be broad-based, as noted during the recent boom. Horizontal diversification may therefore not assist CDDCs in minimizing the effects of price fluctuations. Vertical and non-commodity driven diversification would instead be more relevant strategies for coping with risks in global markets. These forms of diversification require an enabling environment that fosters investment, trade and industrial development. Macroeconomic and political stability, as well as a development governance approach, are also key elements of a successful diversification policy. Lessons may be learned from Indonesia and South Africa, among others, which provide good examples of diversified economies.

4. Market-based risk management strategies

24. Market-based strategies, including financial risk-management mechanisms, create opportunities for countries and their economic agents to manage price risks in commodity markets. These mechanisms have been considered as complementary or alternative options to other policy actions discussed in this note.

25. Market-based instruments, including derivatives such as forward contracts, futures contracts, options or a more complex combination of these tools, allow hedgers to protect themselves from uncertainty in commodity prices.[17] For example, a Government wishing to protect its import bills against potential price surges may buy futures contracts on maize, thereby agreeing on quantities to be delivered and prices to be paid at the time the contract is concluded. With such contracts, the Government would not be concerned with fluctuations in maize prices. Similar agreements may be considered by an exporting country that aims to have guaranteed revenues from selling its natural resources. The main advantage of such risk management instruments is that the hedging entity can determine the cost or revenues at the time the hedge is initiated.

26. Weather index-based insurance is used to mitigate the impact of weather shocks through use of a weather index such as rainfall or temperature to determine payouts for a

[17] A forward contract is an agreement to buy or sell an asset such as a commodity (e.g. maize) at a certain future time for a certain price predetermined by a formula at the time of delivery to the location specified in the contract. It is traded in the over-the-counter market.
A futures contract allows a buyer to accept and a seller to deliver a given quantity of a particular commodity at a specified place, price and time in the future. It is another form of a forward contract, with standardized features that are normally traded on an exchange.
Options are financial tools that allow the holder the right, not the obligation, to buy or sell an underlying asset at a certain price, known as an exercise or strike price, and in a specified quantity by a certain date.

policyholder. Such insurance may be used at producer or country levels to compensate for losses due to adverse weather patterns. Its relevance stems from the fact that it may be more affordable compared to conventional crop insurance, which often relies on a lengthy and costly field loss assessment.

27. Market-based risk management instruments have not yet been broadly used in CDDCs due to, among others, lack of familiarity with these instruments at Government, producer and private sector levels, limited technical and managerial expertise, poor institutional and legal frameworks, costs of hedging and shallowness of the financial sector. The limited success to date of weather index-based insurance has been partly due to the lack of reliable data on weather and the marketing cost of insurance contracts.

28. The experiences of countries that have achieved some success in using market-based risk management instruments may be noted by other countries. For example, Chile and Mexico have been able to stabilize their revenues from natural resources through derivative markets. Risk management instruments such as derivatives exist for producers and buyers in the national commodity exchanges of some developing countries, such as India and South Africa, while Colombia, Ethiopia, Malawi and countries in the Caribbean have used weather index-based insurance. In order to popularize the use of these instruments, significant investments are required, for example to overcome a lack of technical expertise. With adequate support and proper training, the capacity of various stakeholders to devise policies and use market-based risk management instruments may be increased.

II. Improving access to market intelligence, financial resources and markets for CDDCs

29. Improving market information reduces information asymmetry, helping to address extreme volatility in commodity markets. Following the 2008 food crisis, the Group of 20 launched the Agricultural Market Information System to enhance market transparency in order to reduce panic-driven price surges and the associated excessive volatility of prices. Market information is also used by policymakers to better manage food security situations and provide food relief.

30. Access to financial resources is critical for CDDCs in order to improve infrastructure, boost supply-side capacity and diversify economic bases and thereby increase their overall economic resilience.

31. Reducing tariffs and particularly non-tariff measures faced by CDDCs in agricultural export markets and eliminating trade-distorting agricultural subsidies by developed countries are important measures that could help to increase the export revenues of CDDCs and enhance food security.

32. The following sections discuss these issues in detail.

A. Access to market intelligence

33. There is a rising demand from CDDCs for access to timely, reliable and accurate market information for market development, budget planning and monitoring of food security situations. All business participants in commodity supply chains need market intelligence to be more efficient and competitive. For smallholding farmers, who produce 80 per cent of the food consumed in developing countries, improved access to market information encourages spatial and temporal arbitrage and strengthens their bargaining power in business deals.

34. Over the past decade, the rapid development of ICTs in developing countries, in particular the rising use of mobile telephones, has provided new opportunities to improve information access by smallholders in CDDCs and reduce the rural–urban digital gap. In the Asia-Pacific region, the mobile penetration rate (defined as mobile-cellular subscriptions per 100 habitants) was expected to reach 89.2 per cent in 2014 and households with Internet access at home to rise from 11.8 per cent in 2005 to 35.9 per cent in 2014.[14] In Africa, one of the regions with the strongest mobile-cellular growth, the mobile penetration rate increased from 12.4 per cent in 2005 to 69.3 per cent in 2014. About 52 per cent of the African rural population (253 million) was covered by a mobile-cellular signal in 2008 and this rate is expected to exceed 90 per cent by 2015.[15]

35. With the dramatic growth of ICTs in developing countries, the method of delivering market information services is undergoing a dynamic and profound transformation. For smallholding farmers who traditionally relied on family members, fellow farmers or extension services to obtain market information, ICT-enabled applications provide new channels for accessing affordable market information. For example, in Niger, the cost of obtaining price information from a market located 10 kilometres away fell by 35 per cent between 2001 and 2008 due to mobile telephone use.[16] The past decade has witnessed numerous initiatives from the public and private sectors and donors to enhance agricultural market information services through modern ICTs, for example a real-time market information service developed by the Ethiopia Commodity Exchange and Agmarknet, a national web portal in India.

36. ICT-enabled services do not necessarily result in better decision-making, however. Several studies have found that farmers fail to get higher marketing prices even when market information is available.[17] This is because the quality of decision-making is affected not only by access to information but also the ability to analyse the information and the availability of financial resources to use the information. Improved access to market information has more impact on better-educated farmers and those with a better socioeconomic background than on resource-poor illiterate farmers.[18] Therefore, improving the education level of smallholding farmers and addressing other bottlenecks through a holistic approach are important to increasing the impact of market information on the poor.

37. A public–private partnership is critical to enhancing access to and effective use of market information by smallholders in CDDCs. The private sector may focus on the production of more innovative ICT-based products and services to meet the special needs of smallholders. For example, for illiterate farmers in remote areas, voice and local language-based market information is more suitable than text messages. In addition, Governments should continue their efforts to expand mobile telephone network coverage and other ICT

[14] Key ICT indicators (totals and penetration rates) for developed and developing countries and the world are available from the International Telecommunication Union at http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx.

[15] International Telecommunication Union, 2010, *World Telecommunication/ICT Development Report 2010: Monitoring the World Summit on the Information Society Targets* (Geneva).

[16] JC Aker and M Fafchamps, 2010, How does mobile phone coverage affect farm-gate prices? Evidence from West Africa, paper presented at the Allied Social Sciences Association meeting, Atlanta, 3–5 January.

[17] See for example the following: M Fafchamps and B Minten, 2012, Impact of short message service-based agricultural information on Indian farmers, *World Bank Economic Review*, 26(3) 383–414; and J Aker and C Ksoll, 2012, Information technology and farm households in Niger, Working Paper No. 2012–005, United Nations Development Programme.

[18] J Ali and S Kumar, 2011, ICTs and farmers' decision-making across the agricultural supply chain, *International Journal of Information Management*, 31 149–159.

infrastructure in rural areas, increase access to electricity, including through solar panels, in order to allow more smallholders to charge their telephones and other ICT-based devices, and provide smallholders with basic education and training skills in market data interpretation and use.

B. Access to financial resources

38. Many CDDCs have been able to access more diversified financial sources over the past decade. Though traditional official development assistance continues to be an important source of finance for CDDCs, in particular low-income countries, additional external sources such as South-South financing and international capital markets have gained importance in a number of CDDCs. However, for smallholding farmers in many CDDCs, the lack of access to affordable finance continues to be a major constraint to productivity and business growth.

1. Official development assistance

39. Data from the OECD shows that total net official development assistance provided by the OECD Development Assistance Committee member countries rose by 6 per cent to a record $134.8 billion in 2013. However, except for five countries, Development Assistance Committee member countries failed to meet the United Nations target of allocating 0.7 per cent of gross national income to official development assistance. Among the five largest donor countries, only the United Kingdom of Great Britain and Northern Ireland reached the target in 2013, while the share of official development assistance as a percentage of gross national income in Japan and the United States was lower than the average of 0.3 per cent for Development Assistance Committee member countries.[19] Furthermore, the share of total net official development assistance allocated to least developed countries decreased from 34 per cent in 2010 to 32 per cent in 2012.[20] The 2014 Development Assistance Committee Survey on Donors' Forward Spending Plans suggests continuing declines in programmed aid to least developed countries and other low-income countries, particularly in Africa.

40. Since 2007, net official development assistance from Development Assistance Committee member countries to the agricultural sector, including fishing and forestry, has recovered from lows in the late 1990s and first decade of the 2000s, reaching $6 billion in 2012, 9 per cent higher than in 2011 but 6 per cent lower than its peak in 2010.[21] In real terms, aid to agriculture in 2012 was still much lower than its level in the 1980s. At the regional level, there is increasing recognition of the importance of enhancing investment in agriculture. In 2003, African leaders committed to allocating at least 10 per cent of their national budgets to agriculture. However, only 13 countries met or surpassed this target in one year or more during the period 2003–2010.[22] Similarly, most countries have not met the target of spending 1 per cent of agricultural gross domestic product on agricultural research and development, set by the New Partnership for Africa's Development.

---

[19] OECD, 2013, Official development assistance database, available at http://www.oecd.org/statistics/datalab/oda2012.htm (accessed 2 December 2014).

[20] OECD, 2014a, Targeting official development assistance towards countries in greatest need, DCD/DAC(2014)20, available at http://www.oecd.org/dac/externalfinancingfordevelopment/documentupload/DAC(2014)20.pdf (accessed 21 January 2015).

[21] OECD database.

[22] S Benin and B Yu, 2013, *Annual Trends and Outlook Report 2012: Complying with the Maputo Declaration Target* (Washington, D.C., International Food Policy Research Institute).

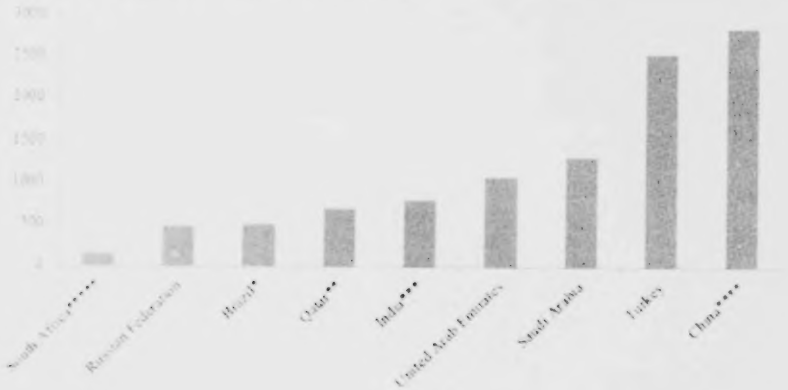
2. South-South cooperation

41. South-South cooperation has become an increasingly important source of development finance for CDDCs. Figure 5 shows the concessional development finance provided by major Southern partners in recent years. China is one of the largest partners in South-South cooperation. According to official data from the Chinese Government, during the period 2010–2012, China's foreign aid, consisting of grants, interest-free loans and concessional loans, totalled ¥89.34 billion ($14.52 billion). Compared with 2009, the share of this aid allocated to least developed countries increased from 39.7 to 52.1 per cent and aid to Africa rose from 45.7 to 51.8 per cent.[23]

Figure 5

Concessional development finance provided by major Southern partners in 2012

(Net disbursements in millions of current dollars)



Note: * refers to 2010 data from annual reports, including on multilateral cooperation; ** refers to 2011 data from annual reports, including on multilateral cooperation; *** refers to 2011 data on technical cooperation; **** refers to 2011 data on bilateral cooperation; and ***** refers to data on multilateral cooperation.

Source: OECD, 2014b, Non-Development Assistance Committee member countries and the debate on measuring post-2015 development finance, DCD/DAC(2014)6, available at http://www.oecd.org/dac/externalfinancingfordevelopment/documentupload/DCD-DAC(2014)6-ENG.pdf (accessed 21 January 2015).

42. Most recently, the launch of the New Development Bank in July 2014 by the Governments of Brazil, China, India, the Russian Federation and South Africa, and the signing of a memorandum of understanding in October 2014 by 21 Asian countries to establish the Asian Infrastructure Investment Bank, further institutionalized the deepening of South-South cooperation. These new initiatives are expected to provide additional funding to much-needed infrastructure and sustainable development projects in developing countries, including CDDCs.

[23] China. Information Office of the State Council, 2011, China's Foreign Aid, April, available at http://www.gov.cn/gzdt/2011-04/21/content_1849712.htm (accessed 22 December 2014); and Xinhua News Agency, 2014, China's foreign aid: Information Office of the State Council white paper, 10 July, available at http://news.xinhuanet.com/politics/2014-07/10/c_1111546676.htm (accessed 22 December 2014).

3. Access to international capital markets

13. Improved domestic macroeconomic environments coupled with low interest rates and excess liquidity in international capital markets has provided a favourable climate for sovereign bond issuance by African CDDCs, as shown in table 1. From 2007 to 2013, sub-Saharan African countries raised $14 billion from Eurobond markets with bond yields significantly lower than domestic borrowing rates, in some cases even lower than the rates in some Eurozone economies.[28] Most of the capital raised was for infrastructure development or debt restructuring, as detailed in table 1.

Table 1
Sovereign bond issuance by selected CDDCs in Africa, 2012–2014

Country	*Year of issue*	*Value (millions of dollars)*	*Coupon (percentage)*	*Maturity (years)*	*Use*
Zambia	2012	750	5.375	10	Investing in infrastructure, particularly in the transport and energy sectors
Gabon	2013	1500	6.375	10	Partial buy-back of existing debt and financing of a public investment programme
Ghana	2013	750	7.875	10	Capital expenditure and refinancing of public debt to reduce the cost of borrowing
Nigeria	2013	500	5.125	5	Financing projects in the electricity sector and supporting a shift from domestic borrowing towards more affordable foreign credit
		500	6.375	10	
Rwanda	2013	400	6.625	10	Construction of 28 megawatt hydropower plant and hotel and paying the debt of State-owned RwandAir
Côte d'Ivoire	2014	750	5.375	10	Financing public investment, especially in health care and education
Ethiopia	2014	1000	6.625	10	Funding electricity, railway and sugar industry projects
Kenya	2014	2000	6.875	10	Infrastructure projects and repayment of a loan of $600 million
		750	5.875	5	

Sources: Bloomberg, Reference data services; R Brand, P Wallace and L Pronina, 2014, Ethiopia starts marketing debut Eurobond for projects, Bloomberg, 4 December; T Hale and E Moore, 2014, Strong demand for Ivory Coast bond, *Financial Times*, 16 July; Z Hou, J Keane, J Kennan, I Massa and DW te Velde, 2014, *Shockwatch Bulletin: Global Monetary Shocks – Impacts and Policy Responses in sub-Saharan Africa* (London, Overseas Development Institute); K Manson and J Blas, 2014, Kenya's debut $2 billion bond breaks Africa record, *Financial Times*, 16 June; T Sulaiman, 2013, Update 1: Gabon raises $1.5 billion through new Eurobond and partial buyback, *Reuters*, 5 December.

[28] Africa Progress Panel, 2014, *Africa Progress Report 2014: Grain Fish Money – Financing Africa's Green and Blue Revolutions* (Geneva).

44. Sovereign bond issuance has provided relatively affordable long-term financial resources to a number of CDDCs in Africa and set a benchmark for domestic companies that may wish to emulate the Government in accessing Eurobond markets. However, bond issuance is also associated with significant risks, such as delays in the implementation of infrastructure projects, the devaluation of local currencies caused by falling commodity prices and rising fiscal and current account deficits. If not properly managed, these risks could lead to unsustainable levels of debt in CDDCs. The extent to which Eurobond markets could become a sustainable source of finance will largely depend on the capacities of CDDCs in Africa to manage external debt and their economies in general. One test will be how these countries cope with the rapidly changing international economic environment, such as the unexpected recent drop in fuel prices and the rise in United States interest rates.

4. Access to credit by smallholding farmers

45. Various constraints, such as stringent collateral requirements, the lack of credit records and the high cost of delivering agricultural finance in rural areas, put agricultural credit out of the reach of smallholders in CDDCs. Over the past two decades, the development of global supply chains, coupled with the emergence of innovative financing mechanisms, has created new opportunities for access to credit for smallholders. Table 2 provides examples of the new mechanisms of financing through contract farming, factoring and warehouse receipt financing. To scale up these financing schemes for the benefit of a large number of smallholding farmers, a multi-stakeholder approach is critical, as smallholders need various forms of support with regard to market access, quality compliance, supply consistency, collective action, access to agricultural insurance and financial literacy.

Table 2

Innovative financing mechanisms for access to credit by smallholders

Mechanism	*Key characteristics*	*Examples*
Financing through contract farming	• Applicability is fairly general, with no restriction on types of agricultural products • Most successful schemes associated with agricultural products that are high-value or produced for processing and/or export • Products for which there is high local demand may be less suitable due to risk of side selling	Starbucks, in partnership with Root Capital, offers pre-harvest finance to smallholders in Central America that supply coffee to the company
Factoring	• Short-term trade finance instrument • Possible to support all kinds of crops • Is used to speed up working capital turnover • Serves small and medium-sized enterprises with a large number of transactions • Finances only post-invoice contractual obligations	Small producers in Fiji able to sell potatoes to local processors and address delayed payments by buyers via simplified factoring scheme provided by rural banking and microfinance services of Australia and New Zealand Bank

Mechanism	*Key characteristics*	*Examples*
Warehouse receipt financing or inventory credit	• Suitable for non-perishable crops • Short-term finance • Adequate storage and appropriate legal framework important for success	Warehouse receipt financing in the United Republic of Tanzania for cereals such as maize and paddy rice Inventory credit in Niger for millet, peanuts, cowpeas and paddy rice

Sources: C Miller and L Jones, 2010, *Agricultural Value Chain Finance: Tools and Lessons* (Bourton on Dunsmore, Food and Agriculture Organization of the United Nations and Practical Action Publishing); and UNCTAD, forthcoming, *Commodities and Development Report: Inclusive and Sustainable Commodity Development – The Case of Smallholding Farmers*.

46. New initiatives have recently been developed to address the longer-term financing needs of smallholder agriculture, including the Fairtrade Access Fund. Established in 2012, this innovative investment fund is designed to meet the financing and technical assistance needs of Fairtrade smallholding farmer cooperatives and associations. In addition to working capital and trade finance, a unique focus of the Fund is to provide long-term loans of one to five years that enable smallholders to invest in crop renewal, farm improvements, equipment, processing facilities and preparation to meet Fairtrade certification.[25]

47. To assist smallholding farmers in accessing affordable finance, Governments need to improve their financial infrastructure and legal frameworks, enhance basic education and offer financial literacy programmes. Furthermore, properly designed credit guarantee schemes provided by Governments or donors may leverage lower interest rate-funding for smallholder farming. The Alliance for a Green Revolution in Africa, together with other partners, has established loan-guarantee funds to leverage larger loans from commercial banks, including $50 million in low-interest loans from Equity Bank Kenya, to provide credit for smallholding farmers and small agricultural businesses.[26]

C. Access to markets

48. Following a decade of inconclusive negotiations, WTO members reached an agreement in Bali, Indonesia, in December 2013. The Agreement on Trade Facilitation was a major breakthrough and, in November 2014, the adoption of the Protocol of Amendment, which formally inserts the Agreement into annex 1A of the Agreement Establishing the WTO, further paved the way for its implementation. For CDDCs, the Agreement on Trade Facilitation could reduce trade transaction costs, boost regional trade and increase trade volumes. However, CDDCs are still facing many challenges in other key areas of international trade, such as tariff peaks and tariff escalation, the elimination of trade distorting agricultural subsidies and non-tariff measures.

1. Trade facilitation

49. Trade facilitation addresses key bottlenecks in trade logistics and enhances the efficiency and transparency of international trade. For importers and exporters, trade facilitation measures reduce transaction costs and save time. A recent study found that full

[25] Fairtrade Access Fund, 2012, *Fairtrade Access Fund Brochure* (Colombia).

[26] Alliance for a Green Revolution in Africa, 2009, *2020 Strategy for African Green Revolution* (Nairobi).

implementation of the Agreement on Trade Facilitation could lead to trade cost reductions of 14.1 per cent for low-income countries, 15.1 per cent for lower middle-income countries and 12.9 per cent for upper middle-income countries.[27] This could lead to increased trade, yet import gains may be significantly higher than export gains for developing countries.[28]

50. Trade facilitation reforms help modernize border controls and enhance revenue collection. Asycuda, a customs automation programme that has been implemented in more than 90 developing countries with the technical support of UNCTAD, has significantly contributed to better border controls and revenue collection. For some regions, such as Africa – where regional trade only accounts for about one tenth of total trade and the cost of customs procedures is significantly higher than the world's average – successful implementation of the Agreement on Trade Facilitation could stimulate regional trade flows and promote regional integration.

51. However, the costs of implementation of trade facilitation measures may be a concern for some developing countries, in particular least developed countries.[29] In addition, for the Agreement on Trade Facilitation to have a more tangible developmental impact on the ground, its implementation needs to be accompanied by additional investments in physical and economic infrastructure in some developing countries. The WTO recently launched the Trade Facilitation Agreement Facility, aimed at assisting developing countries and least developed countries in carrying out the Agreement. More funding is needed to support this facility, as well as other similar technical assistance programmes such as Asycuda.

2. Tariff peaks and tariff escalation

52. Tariff peaks, often defined as tariffs with rates above 15 per cent, have a stronger impact on agricultural goods rather than non-agricultural goods. In 2013, only 2.6 per cent of non-agricultural tariff lines were affected by tariff peaks in high-income OECD countries, in contrast to 35.8 per cent of agricultural tariff lines. The situation has deteriorated compared with the year 2000 when tariff peaks affected 33.4 per cent of agricultural tariff lines.[30]

53. Tariff escalation refers to a situation where low tariffs are applied to imported raw materials and higher tariffs are applied to processed products. Through tariff escalation, importing countries seek to protect their domestic processing industries while ensuring the supply of low-cost raw material. For commodity-exporting countries, tariff escalation discourages the domestic value addition of commodities for export. Tariff escalation is particularly relevant to agricultural goods. In high-income OECD countries, the difference between applied tariffs on fully processed agricultural goods and those on agricultural raw materials was 10.5 per cent in 2013, compared with 12.6 per cent in 2000.[31]

---

[27] OECD Trade and Agriculture Directorate, 2014, The WTO Trade Facilitation Agreement: Potential impact on trade costs, available at http://www.oecd.org/trade/tradedev/OECD_TAD_WTO_trade facilitation_agreement_potential_impact_trade_costs_february_2014.pdf (accessed 21 January 2015).

[28] GC Hufbauer, JJ Schott, M Adler, C Brunel and WF Wong, 2010, *Figuring Out the Doha Round* (Washington, D.C., Peterson Institute for International Economics).

[29] R Banga, 2014, Trade facilitation and hollowing-out of Indian manufacturing, *Economic and Political Weekly*, 49(40):57–63.

[30] Millennium Development Goal Gap Task Force, 2014, *Millennium Development Goal 8: The State of the Global Partnership for Development* (New York, United Nations publication).

[31] Ibid.

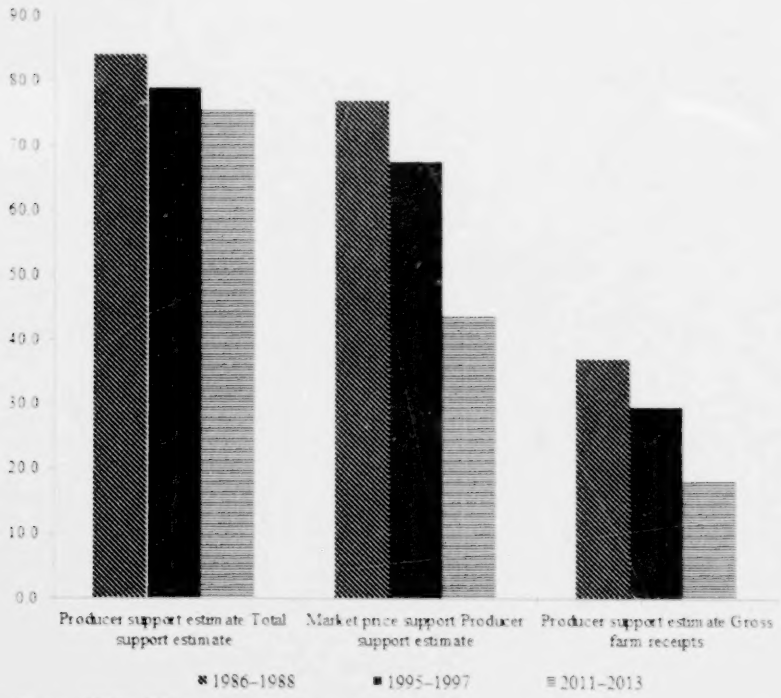
3. Agricultural subsidies

54. In 2013, OECD countries provided about $258 billion to support their agricultural producers, which accounted for 18 per cent of gross farm receipts, compared to 30 per cent in 1995–1997, as shown in figure 6. Despite this reduction, the share of the most trade and production distorting support still accounted for 51 per cent of producer support during the period 2011–2013. For example, market price support continued to be the single most important instrument of policy transfers, averaging $114 billion during the period 2011–2013 or 44 per cent of producer support. There are concerns that market price support in OECD countries might rise in the context of the falling agricultural commodity prices. Because of these support measures, prices received by farmers in OECD countries were 10 per cent higher than international market levels during the period 2011–2013.[32]

Figure 6

Trends in agricultural subsidies provided by OECD countries

(Percentage)



Source: OECD, 2014c.

55. Overall, support for specific commodities in OECD countries decreased from $191 billion in 1995–1997 to $137 billion in 2011–2013. However, significant differences existed among countries and commodities. In the United States, for instance, support dedicated to cotton averaged $625 million in 2011–2013, 82 per cent above the level in 1995–1997. In the United States Agricultural Act of 2014, direct and countercyclical payment programmes were eliminated and a new insurance product, the Stacked Income

[32] OECD, 2014c, *Agricultural Policy Monitoring and Evaluation 2014: OECD Countries* (Paris).

Protection Plan, was introduced to upland cotton producers, to meet United States obligations following the WTO ruling on the cotton dispute.[33] With the operationalization of the Plan in 2015, it is expected that United States farmers will have less incentive to produce cotton due to a lower level of support under the Plan.[34]

56. Another key trend is the substantial decline of trade-distorting subsidies under the WTO amber box classification and the rising use of green box subsidies, which should, by definition, cause no or minimal trade distortion. For example, during the period 1995–2010, the United States increased domestic support under the green box from $46 billion to $120 billion, while the European Union increased domestic support from €9.2 billion to €68 billion.[35] Developing countries are increasingly concerned about these trends, as some of the measures, such as decoupled payments, can affect agricultural production and trade.[36] A review of green box provisions, including capping the green box subsidies of developed countries and allowing special flexibility in addressing the concerns of developing countries on food security and poverty reduction, should be integrated into the post-Bali trade negotiation programme.

4. Non-tariff measures

57. The past decade has witnessed the proliferation of non-tariff measures in international trade in the agricultural sector. Though the initial purpose of these regulatory measures was not aimed at restricting trade, non-tariff measures constitute, de facto, an important barrier to market access. This is particularly the case for agricultural exports to developed countries from low-income developing countries.

58. Sanitary and phytosanitary measures and technical barriers to trade (e.g. quality requirements and environmental protection measures) are the two categories of non-tariff measures most frequently applied in agricultural trade. As detailed in *Non-tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 71 per cent of live animals, 69 per cent of vegetable products and 57 per cent of processed food products are subject to at least one form of sanitary and phytosanitary measure, while technical barriers to trade are applied to 42 per cent of processed food products, 36 of live animals and 32 per cent of vegetable products.[37] The increasing use of these measures could lead to higher production and trade costs and offset perceived gains from tariff reductions.

59. Low-income agricultural commodity-exporting countries are disproportionately affected by such measures due to their relatively low technical and financial capacities in meeting stringent sanitary and phytosanitary standards and overcoming technical barriers to trade. To help them seize trade opportunities, such standards and technical regulations need to be streamlined and harmonized at both national and global levels. In addition, technical and financial assistance is critical in addressing the major constraints faced by low-income

[33] In 2002, Brazil initiated a WTO dispute against the United States on unfair cotton subsidies by the United States. In 2005 and 2008, the WTO ruled that certain features of the agriculture programmes of the United States were inconsistent with the country's WTO commitments. In October 2014, Brazil and the United States reached an agreement to terminate this dispute in the WTO.

[34] UNCTAD, forthcoming, *The United States Agricultural Act of 2014 and its Implications for Cotton Producers in Low-income Developing Countries*.

[35] R Banga, 2014, Impact of green box subsidies on agricultural productivity, production and international trade, Background Paper No. RVC-11, Development Oriented Integration in South Asia, UNCTAD.

[36] International Centre for Trade and Sustainable Development, 2009, Agricultural subsidies in the WTO green box: Ensuring coherence with sustainable development goals, Information Note, No. 16.

[37] UNCTAD, 2013, *Non-tariff Measures to Trade: Economic and Policy Issues for Developing Countries* (New York and Geneva, United Nations publication).

countries in addressing such measures, such as high compliance costs, inadequate trade infrastructure and lack of access to appropriate technologies.[38]

III. Conclusion

60. Although price volatility has declined over the last three years, coping with such volatility remains a challenge for many CDDCs. Price volatility is becoming a new norm, affecting the economic welfare of both commodity-exporting and importing countries, in particular CDDCs. To date, policy measures that aimed to mitigate the impact of high price volatility have achieved limited and mixed results. It is necessary to improve existing options through sharing best practice experiences and exploring innovative ways of dealing with the issue at national, regional and international levels.

61. With regard to access to market intelligence and finance, new opportunities have emerged in the past decade due to, among others, technological advances and the strengthening of economic cooperation among developing countries, as well as the increasingly higher participation of developing countries in global value chains. With appropriate policies and active engagement by the private sector and continuing support from development partners, many of these opportunities may be turned into real benefits for CDDCs. With regard to market access, WTO member countries should build on the momentum established during the Ninth Ministerial Conference to effectively address issues of particular concern to CDDCs, including trade-distorting agricultural subsidies, tariff peaks and tariff escalation and non-tariff measures.

---

[38] The European Union contributed approximately €75 million in 2013 to technical assistance programmes related to sanitary and phytosanitary measures, including the Quality and Conformity – Fruits and Vegetables programme (phase two of the Pesticide Initiative Programme) and the programme for the development of food safety standards in African, Caribbean and Pacific countries.